Column 415

Climate change a factor in environmental assessment

by Claire Eamer

Environmental assessment is complicated at the best of times. You have to think about what impact a project might have on the environment and society, and what impact the environment itself might have on the project.

You also have to think about cumulative effects, what impacts other projects might have on the effects of the project you're looking at.

Climate change can have a profound impact on the environment. Here, McIntyre Creek and the Yukon River cut through an ancient lake bottom created when the climate warmed enough to end the last glaciation.

(photo: Claire Eamer)

When you add in climate change, the mixture gets very complicated indeed. That's why a group of federal, territorial, and provincial environmental assessment managers, along with the Canadian Environmental Assessment Agency (CEAA), has developed a guidance document for considering climate change in environmental assessments.

Two Yukon officials, Jon Bowen of Yukon Environment and Ian Church, now with the Yukon government's Executive Council Office, were part of the group.

When the guidance document was introduced to an international audience of environmental assessment professionals at a conference in Vancouver in 2004, Canada was praised for doing something new, says Church.

The Canadian group began developing the guidance document in 2001, in response to concerns about how development projects add to greenhouse gas emissions and how they might be affected by a changing environment.

At the time, Church explains, the Kyoto Protocol had not yet been ratified and there was little or no regulatory framework in Canada around greenhouse gas emissions.

"Some action, as long as it was in the correct trajectory, is better than waiting for more certainty," he says. "Practitioners need something now because they are having pressures put on them for approaches which often haven't been invented yet."

The CEAA guidance document was released in late 2003. It includes both an approach to considering the amount of greenhouse gases a project might contribute to the atmosphere and ways to consider the effects of climate change caused, at least in part, by greenhouse gases.

Waiting for certainty about those effects was not an option, says Church.

"I think now there is generally agreement within the scientific community that climates change, and that the climate is changing faster than it would within the natural variability that we have seen for many millions of years."

We will probably never be certain about the nature of the future climate, he says, but we can't be certain about other aspects of the future either.

"I often think there is probably more certainty over the next 100 years about the trend of climate change than there is about general political, business, or economic cycles. Uncertainty is part of the natural chaos that surrounds us."

The guidance document offers no hard and fast rules, partly because the details of environmental assessment vary across Canada and partly because hard and fast rules don't deal well with uncertainty. Instead it provides a common set of questions to ask and points to consider when looking at the planning of a project.

"Most projects need to plan for uncertainty or contingency, " says Church. "The uncertainty with climate change will likely result in the need to add further contingency into project design."

For example, he says, the national building code specifies minimum snow loading on roofs for different regions of the country. What happens to a project if snowfalls increase?

Or what happens to the risk associated with a project if the probability of fires in the adjacent forest increases?

Not all changes linked with climate change will add to the riskiness of a venture, Church points out. For example, reduced sea ice and more open water in the Arctic Ocean may mean that navigation restrictions there can be eased.

The degree to which a project contributes to climate change is also a concern, Church says.

"How about the greenhouse gas emissions related to mining limestone, transporting and producing energy, transporting cement, etc.?" he asks. "The guideline tries to simplify this, but as we continue to butt against Kyoto-like targets for emission reduction these factors will somehow need to be examined."

The CEAA guidance document is the first word but not the last word on the subject. To see it, go to www.ceaa-acee.gc.ca/012/014/index_e.htm.

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